

# Data Production Workshop

## DBHYDRO

### Data Storage and Retrieval

March 16, 2004

## Slide 1

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tsangoyo, 1/9/2004

# DBHYDRO Overview

- What is DBHYDRO?
- History
- Statistics Of The Database
- Coverage Area
- Data Types
- Data Flows
- How To Access DBHYDRO

# **What is DBHYDRO?**

**SFWMD Corporate Environmental Database  
for  
Samples, Measurements, and Results**

# History

- 1985 – First data model for DBHYDRO was documented. Ron Mierau et al.
- 1986 – Tom Van Lent and Tom MacVicar. Control Data Corporation Cyber 180 mainframe. DMS-170 data management software. Terminal command line interface written in FORTRAN.
- 1992 - Migrated to Oracle 7 on DEC VAX VMS. Character mode Oracle forms interface linking to legacy FORTRAN.
- 2000 - Web interface using Oracle PL/SQL web toolkit. First SFWMD database driven web application.
- 2003 - Migrated to Oracle 8i on Unix. Continue to enhance web interface. Use of Java for all new code.

## Current Activities

- 2004 – Nutrient Load computation for all water control structures (just implemented)
- 2004 – Radar Rainfall (presentation)
- 2004 – Web Atlas for Hydraulic Structures (poster)
- 2004 – Water Quality Project-based Map Interface
- 2004 – One-Flow Initiative (poster)
- 2004 – Oracle 9i preparations

## Volumes and Sizes

- 8,000+ locations
- 80,000+ station-years of data
- 29,000,000+ daily values
- 5,000,000+ sample results
- 5,000+ boreholes

## Coverage Area

- 16 county area primarily
- Geophysical and lithological data from all Florida counties



# Data Types

- **38 Measurement Types**

Surface Water And Ground Water Hydrology,  
Meteorological, And Geological Data

- **866 Sample Result Types**

Biological, Field, Major Ions, Metals, Nutrients, Organics,  
Physical Parameters

- **Derived data such as model data sets,  
discharge, and evapotranspiration**

# Frequency

- Instantaneous
- Daily
- Some Monthly

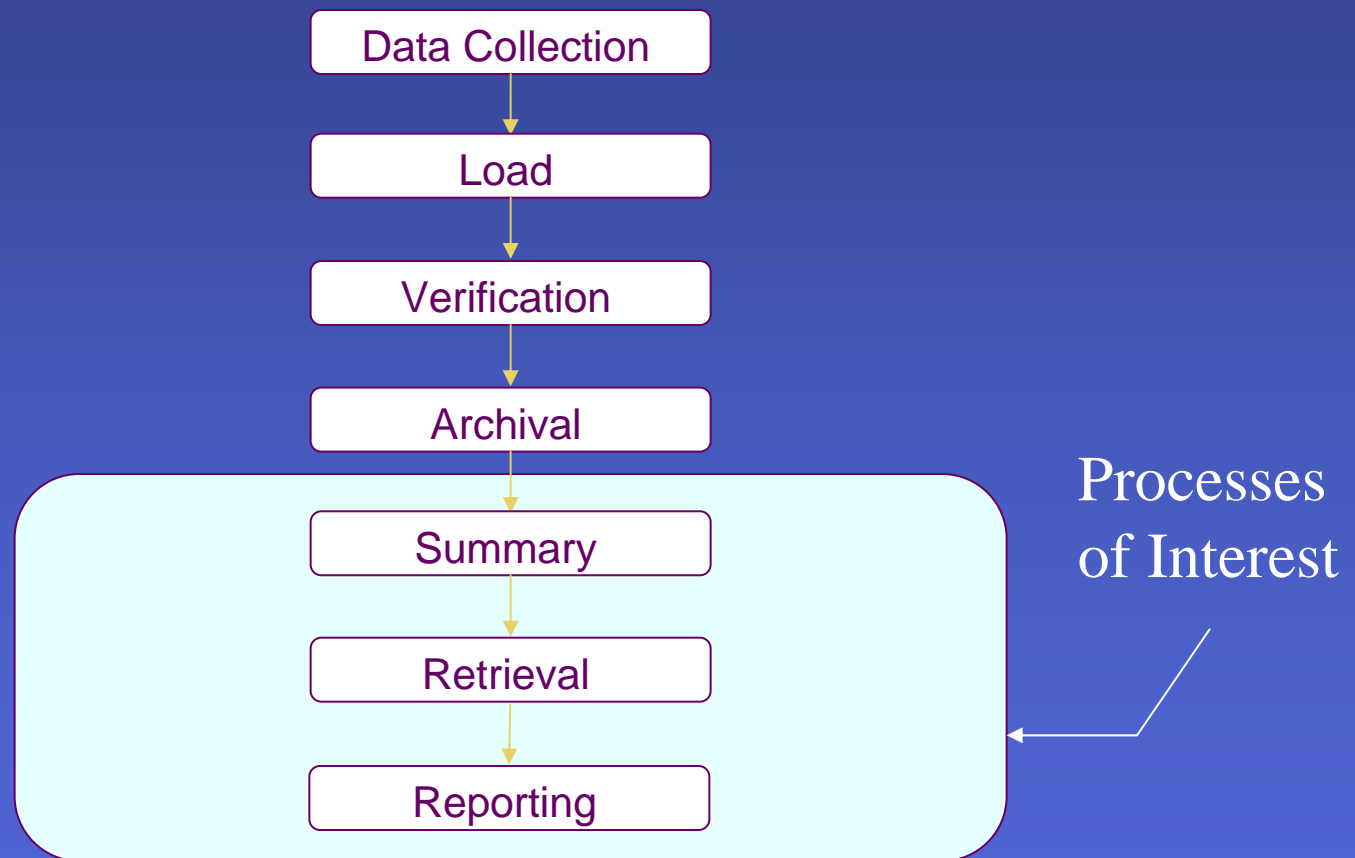
# Statistic Types

- Mean
- Min
- Max
- Instantaneous
- Sum

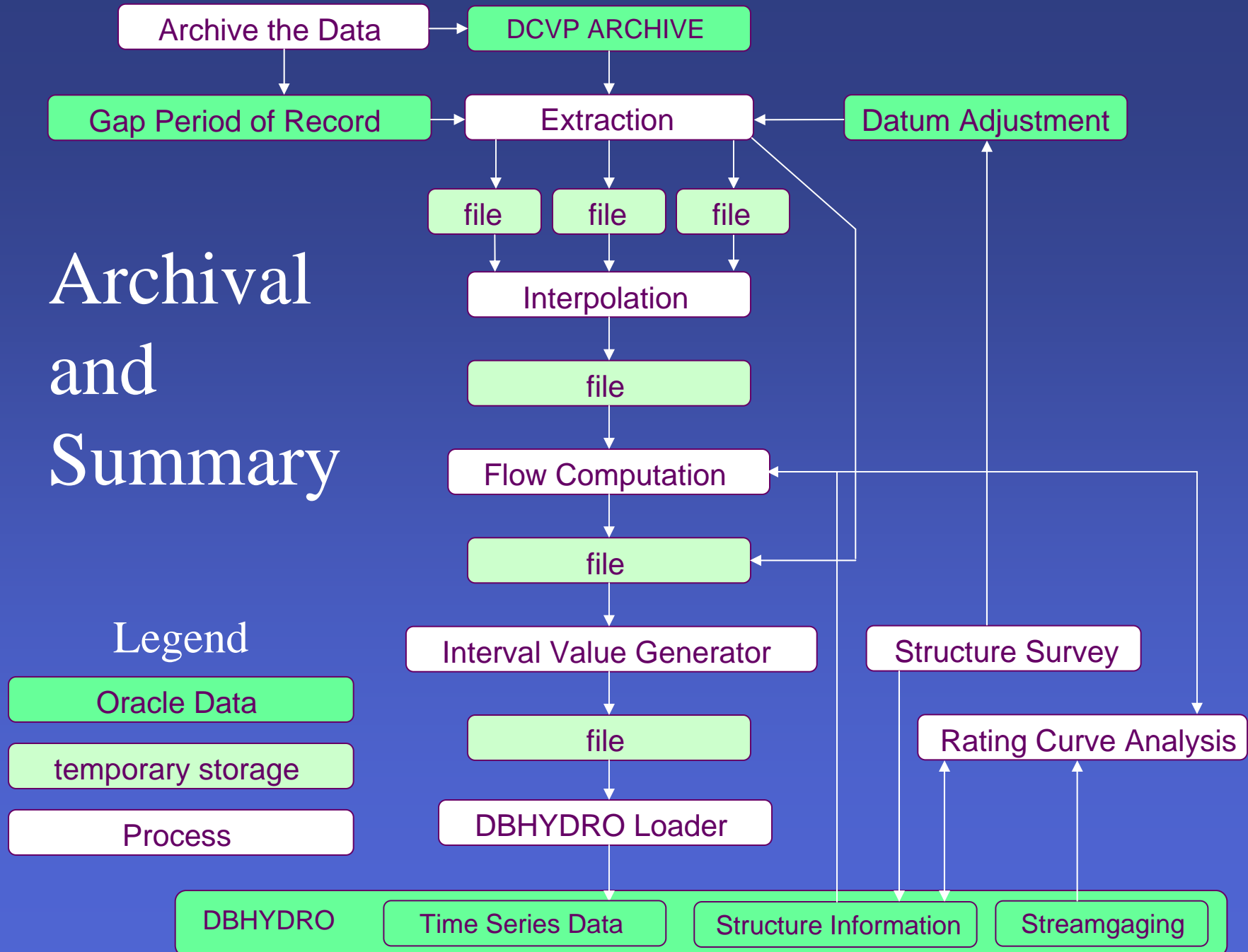
# Agencies

- SFWMD
- USGS (Flow, Water Level)
- NOAA (Rain, Air Temperature)
- U. S. Army Corps of Engineers
- Everglades National Park
- Others

# Data Flows



# Archival and Summary



# How To Access DBHYDRO

- Intranet (internal)

<http://iweb> →

Business Online →

DBHYDRO Browser

DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

File Edit View Favorites Tools Help

## DBHYDRO Browser Menu

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- [Surface Water and Meteorological Data](#)
- [Ground Water Data](#)
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# How To Access DBHYDRO

- On the Internet (external)

<http://www.sfwmd.gov/> →

Technical Data →

DBHYDRO Browser

# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Welcome to DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

File Edit View Favorites Tools Help

[sfwmd.gov](http://sfwmd.gov)

## DBHYDRO browser

First Time User?  
...click here

DBHYDRO is the South Florida Water Management District's corporate environmental database which stores hydrologic, meteorologic, hydrogeologic and water quality data. This database is the source of historical and up-to-date environmental data for the 16-county region covered by the District.

The DBHYDRO Browser allows you to search DBHYDRO, using one or more criteria, and to generate a summary of the data from the available period of record. You can then select data sets of interest and have the time series data dynamically displayed on your screen in tables or graphs. You can also download data to your computer, for later use.

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**EMA**  
Good Data, Good Science, Good Decisions  
Environmental Monitoring & Assessment Department  
SFWMD.GOV

[sfwmd.gov](http://sfwmd.gov)

# How To Access DBHYDRO

Training Class - IRD4000

# How Else To Access DBHYDRO

- **Microsoft Access**

Linked tables

- **Microsoft Excel**

Data →

Import External Data

- **Oracle SQL\*Plus**

- **Any other ODBC or JDBC compliant software**

# Questions?